

ABSTRACT OF THE DISCLOSURE

A compound semiconductor material for forming an active layer of a thin film transistor device is disclosed, which has a group II-VI compound doped with a dopant ranging from 0.1 to 30 mol%, wherein the dopant is
5 selected from a group consisting of alkaline-earth metals, group IIIA elements, group IVA elements, group VA elements, group VIA elements, and transitional metals. The method for forming an active layer of a thin film transistor device by using the compound semiconductor material of the present invention is disclosed therewith.

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